

Notice of Allowability

Application No.

09/711,867

Examiner

Jonas N. Strickland

Applicant(s)

MATHES ET AL.

Art Unit

1754

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the claims filed on 9/30/2004.
2. ☒ The allowed claim(s) is/are claims 1-7.
3. ☒ The drawings filed on 13 November 2000 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

Allowable Subject Matter

1. Claims 1-7 are allowed.
2. The following is an examiner's statement of reasons for allowance: The instantly claimed invention is allowable over the cited prior art, because the cited prior art fails to disclose a process for the selective catalytic reduction of nitrogen oxides in an oxygen-containing gaseous medium, which comprises introducing a substance to be converted into a reducing agent into a carrier gas and converting the substance into reducing agent in a preparation reactor and branching off a portion of the carrier gas after having passed through the preparation reactor and feeding back the portion to the preparation reactor.

Cho et al. (EP 0583878 A1) discloses using flue gas energy to vaporize aqueous reducing agent for the reduction of nitrogen oxides in flue gas in a combustion system. A heat exchanger is disposed in the flue gas path so that it heat from the flue gas heats a heat transfer medium, preferably air (a carrier gas) and introducing an aqueous reducing agent such as urea or aqueous ammonia into the carrier gas in a vaporizer vessel and then adding the vaporized ammonia (the reducing agent) into the flue gas path where it effectively reduces nitrogen oxides from an upstream position (see abstract; page 2, lines 10–14 and page 3, lines 3-51). However, Cho et al. fails to disclose branching off a portion of the carrier gas after having passed through the preparation reactor and feeding back the portion to the preparation reactor.

Mathes et al. (WO 97/07876 A2 as translated by USP 5,974,789) teaches a method and device for decomposing nitrogen oxides in an exhaust gas of an internal

combustion engine, include feeding the exhaust gas and a reactant, which is sprayed into the exhaust gas through the use of compressed air, to a catalytic converter. A part of the compressed air is diverted and used as the compressed air for injecting the reactant (see abstract and col. 3, lines 8-42). However, the diverted gas is not fed back into the preparation reactor.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonas N. Strickland whose telephone number is 571-272-1359. The examiner can normally be reached on M-TH, 7:30-5:00, off 1st Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman can be reached on 571-272-1358. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jonas N. Strickland
November 26, 2004



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